

Claims

1. An applicator for applying paint to a surface, the applicator including a body for paint, paint distribution means to distribute paint in use onto a surface by contact with that surface, the body including paint biasing means to bias, in use, the paint toward the distribution means, an operator in use holding the tool by the body and operating control means for control of the bias means and so the flow of paint distribution means, the applicator characterised in that the paint biasing means acts by applying incremental axial displacement of the paint.
2. An applicator as claimed in claim 1, wherein the paint distribution means is releasably engageable with the body and forms a separable applicator head.
3. An applicator as claimed in claim 2, wherein the head includes mounting means for rotably mounting a roller with a roller surface which in use contacts the surface to be painted.
4. An applicator as claimed in claim 2 or claim 3, wherein the head includes a hood which partially encloses the roller.
5. An applicator as claimed in any of claims 2, 3 or 4, wherein the head includes flow regulation means to regulate the flow of paint to the roller surface in association with the biasing means.
6. An applicator as claimed in claim 5 where dependent upon claim 4, wherein the flow regulation means includes a gap defined between a distribution means surface and the hood.
7. An applicator as claimed in any of claims 2 to 6, wherein the head includes at least one passage defined in the hood and normally a plurality of passages therein.

8. An applicator as claimed in claim 7, wherein the passages are arranged in a row running parallel with the axis of the distribution means surface.

5 9. An applicator as claimed in claim 8, wherein the row of passages extends substantially the width of the surface.

10. An applicator as claimed in claim 8, wherein the row is shorter in length than the width of the surface, and each end of the row is not less than 25mm
10 from the corresponding end of the surface.

11. An applicator as claimed in any of claims 7 to 10, wherein the gap is at a minimum at or adjacent to the or each passage.

15 12. An applicator as claimed in any of claims 2 to 11, wherein the hood includes a concave internal hood surface.

13. An applicator as claimed in any of claims 2 to 12, wherein the hood has a different radius to the roller surface.

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14. An applicator as claimed in claim 13, wherein the hood is of larger radius than the surface.

15. An applicator as claimed in any of claims 12 to 14, wherein the roller
25 surface and the hood surface are not concentric.

16. An applicator as claimed in any of claims 12 to 15, wherein the roller surface and hood surface diverge away from each other about the passages.

30 17. An applicator as claimed in any of claims 2 to 16, wherein the head includes a recess defined in the hood, and the or each passage leads to the recess.

18. An applicator as claimed in claim 17, wherein the recess forms a plenum chamber.

19. An applicator as claimed in claim 17 or 18, wherein the recess extends
5 substantially the width of the distribution means surface.

20. An applicator as claimed in any of claims 17 to 19, wherein each end of the recess is not less than 18mm from the corresponding end of the distribution means surface.

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21. An applicator as claimed in any of claims 17 to 20, wherein edges are defined where the recess meets the internal hood surface, and the gap is at a minimum at the edges.

15 22. An applicator as claimed in claim 21, wherein the distribution means surface contacts the edges.

23. An applicator as claimed in claim 21 or claim 22, wherein elongate projections are provided along the edges parallel to the roll axis of the roller,
20 and the projections are rounded in form.

24. An applicator as claimed in claim 3 and any claim dependant thereon, wherein the mounting means for the roller are adjustable, so that a minimum gap is adjustable.

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25. An applicator as claimed in claim 3 and any claim dependant thereon, wherein the mounting means allows the roller to be removed from the head.

26. An applicator as claimed in any preceding claim, wherein a paint trap is
30 provided adjacent to the roller.

27. An applicator as claimed in any preceding claim, wherein there is a stop member to limit the bias means for control of the flow of paint.

28. An applicator as claimed in any preceding claim, wherein the bias means is associated with an extension handle to allow displaced or elevated operation of the applicator.

5 29. An applicator as claimed in any preceding claim, wherein the distribution means surface includes textures or patterns to facilitate paint distribution on the surface to be painted.

10 30. An applicator as claimed in any preceding claim, wherein the body includes holding means for a paint container.

31. An applicator as claimed in claim 30, wherein the paint container is removable.

15 32. An applicator as claimed in claim 30 or claim 31, wherein the paint container is elongate with an oval or rectangular cross-section with the major axis substantially aligned with a slot of the applicator.

20 33. An applicator as claimed in any preceding claim, wherein the body includes refilling means.

34. An applicator as claimed in claim 33, wherein the refilling means comprises a threaded end cap.

25 35. An applicator as claimed in any preceding claim, wherein the paint biasing means includes a plunger, which is movable to act on the paint in the body or the paint container such that as the plunger advances, the bias on the paint forces flow to the paint distribution means.

30 36. An applicator as claimed in claim 35, wherein the plunger includes rod means, which extends away substantially along the longitudinal axis of the body from a plunger head acting upon the paint.

37. An applicator as claimed in any preceding claim, wherein the body includes gripping means having a handle in the form of a tube having a passage therethrough.

5 38. An applicator as claimed in claim 37 when dependant upon claim 36, wherein the rod means extends into and along the handle.

39. An applicator as claimed in claim 38, wherein the rod means extends beyond the handle and may include a gripping portion at its distal end by
10 which the plunger may be moved.

40. An applicator as claimed in claim 39, wherein the gripping portion includes a lateral extension, extending laterally beyond the handle.

15 41. An applicator as claimed in claim 40, wherein the lateral extension forms a base on which the tool is supported, and includes a planar surface perpendicular to the longitudinal axis of the body.

42. An applicator as claimed in claim 36 and any claim dependant thereon,
20 wherein the rod means comprises a rod extending from the plunger head and a gripping member telescopically mounted within the handle and slidably engaged with the rod.

43. An applicator as claimed in claim 42, wherein a gripping portion is
25 mounted on the gripping member.

44. An applicator as claimed in claim 42 or claim 43, wherein the gripping member is biased to a retracted position.

30 45. An applicator as claimed in claim 37, wherein the control means includes a trigger mounted on or adjacent to the handle.

46. An applicator as claimed in claim 45, wherein the handle includes a linkage operable by the trigger to advance the plunger.

47. An applicator as claimed in claim 46, wherein the linkage comprises a link plate having an oversized aperture through which the rod passes.

48. An applicator as claimed in claim 47, wherein the link plate is biased towards the trigger and, in a relaxed condition, out of engagement with the plunger, so that as the trigger is operated the link plate is brought into engagement with the plunger, further operation of the trigger moving the link plate towards the paint in the body or container and causing the plunger to advance to bias the paint towards the distribution means.

49. An applicator as claimed in claim 2 and any claim dependant thereon, wherein the applicator includes connection means interposed between the applicator head and the body.

50. An applicator as claimed in claim 49, wherein the connection means articulated to allow the angle of the paint distribution means to be varied relative to the longitudinal axis of the body.

51. An applicator as claimed in claim 30 and any claim dependant thereon, wherein the paint container is formed of translucent material, to provide a visual indication of the amount of paint in the container.

52. An applicator substantially as hereinbefore described with reference to the accompanying drawings.

53. A method of applying paint to a surface, the method comprising the use of an applicator as claimed in any preceding claim, the method comprising providing paint to the applicator, holding the body, providing bias to the paint to drive that paint towards the distribution means and operating the control means to control a flow of paint to the paint distribution means, while moving the tool so that the paint distribution means contact and move across a surface to be painted, the method characterised in that the bias is provided by applying incremental axial displacement of the paint towards the distribution means.

54. A method as claimed in claim 53, wherein the paint is provided by installation of pre-filled cartridges.

55. A method as claimed in claim 53, wherein the method includes providing the paint by filling the body or a paint container by unscrewing the end cap, pouring in paint, and replacing the end cap.

56. A method as claimed in claim 53, wherein the body or a container is filled by providing paint in flexible pre-filled sachets or bags, the bags sized to fit in the container, the bags being placed in the open container, punctured, and the end cap being replaced.

57. A method as claimed in claim 56, wherein the puncturing will be just prior to installation or during provision of the bias applied to the paint towards the paint distribution means.

58. A method of applying paint to a surface substantially as hereinbefore described with reference to the accompanying drawings.

59. Pouring apparatus for a paint can, the apparatus including a pouring member having an engaging means engageable in use with a portion of the rim of a paint can, the pouring member including a concave pouring surface, the pouring member arranged so that when in engagement with a paint can it has an upright position and the pouring surface directs any paint on the surface to run onto the surface of the paint in the can at a displaced position from the side of the can.

60. Pouring apparatus as claimed in claim 59, wherein the pouring surface extends upwardly in use to an apex.

61. Pouring apparatus as claimed in claim 59 or claim 60, wherein the engaging means encloses a portion of the rim of the can.

62. Pouring apparatus as claimed in any of claims 59 to 61, wherein the pouring member and engaging means are formed integrally, and are made of a resilient flexible material.

5 63. Pouring apparatus substantially as hereinbefore described with reference to the accompany drawings.

64. A method of filling a paint container, the method including filling the paint container from a can using pouring apparatus as claimed in any of
10 claims 59 to 63, the pouring apparatus being sized to direct paint during pouring into the paint container.

65. A method as claimed in claim 64, wherein the paint container is the body of an applicator as claimed in any of claims 1 to 58.

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66. A method of filling a paint container substantially as hereinbefore described with reference to the accompanying drawings.

67. An applicator in which a roller is associated with an applicator head
20 such that paint is distributed upon that roller using paint bias means, characterised in that the head comprises paint traps either side of the roller to accommodate transient excess flows of paint due to any pulsed action of the paint bias means by provision of expansion cavities for those transient excess flows.

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68. An applicator for applying paint to a surface, the applicator including paint biasing means to facilitate flow of paint to paint distribution means, the paint biasing means including a grip configured to progressively displace a plunger or piston in order to facilitate paint flow, the displacement range of
30 that grip limited in order to similarly limit displacement of the piston and therefore rate of paint flow.

69. An applicator as claimed in claim 68, wherein grip displacement is limited by a stop member.

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70. An applicator in which paint biasing means facilitates paint flow to paint distribution means wherein the paint bias means is associated with an extension handle which extends from the paint distribution means to the paint biasing means characterised in that the extension handle allows operation of the applicator at a displaced or elevated position whilst still allowing appropriate displaced operation of the paint biasing means by retention of the paint bias means with the paint distribution means all at one end of the handle and a push rod to operate that paint bias means extending from another end of the handle.

71. An applicator for applying paint to a surface, the applicator including paint distribution means within which an effective slot outlet is provided through which paint is presented to paint distribution means through use of paint biasing means, the paint being accommodated within a paint canister, characterised in that the paint canister has a cross-section of elongate dimensions such that the major axis of the canister is substantially aligned with the slot for better paint distribution through that slot by the paint biasing means.

72. A paint distribution insert for an applicator of paint, the insert comprising a groove network of varying cross-section and arranged whereby resistance to paint flow through the insert is varied across that insert for more even paint distribution across an outlet from an initial single inlet position of substantially narrower width.

73. An applicator for applying paint to a surface wherein that paint is distributed by a roller and the roller is secured through a cam whereby the roller rotates with a rollover rotation past a paint outlet characterised in that the rollover rotation is eccentric with differing gap widths between a roller surface and the outlet on one side and on the other side in the roller rotation direction.

74. An applicator as claimed in claim 73, wherein a slot is provided within which a pin is secured to provide for eccentric rotation as well as varying width between the respective sides of the outlet.

75. Any novel subject matter or combination including novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.